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November 2, 2010

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Re: Response from California Water Impact Network to letter from State and Federal Contractors Water Agency (9-22-10)

Dear Chairman Isenberg and Members of the Council:

As a member of the Environmental Water Caucus, the California Water Impact Network (C-WIN) writes to clarify the issue of toxic agricultural lands in the Western San Joaquin Valley.

It is important to note that there is no Best Practicable Treatment and Control technology¹ to treat the toxic drainage from the Western San Joaquin Valley on the scale necessary other than land retirement. The U.S. Geological Survey has stated that "*Land retirement is a key strategy to reduce drainage because it can effectively reduce drainage to zero if all drainage-impaired lands are retired.*"² Even if treatment were feasible, it is not cost effective and any potential solutions rely heavily on massive public subsidies.

We disagree with the assertion by the water contractors that "state mandated water quality requirements have been met for over 10 years" for the Grasslands Bypass Project. Water quality standards that protect fish and wildlife have not been enforced. They have been waived for the past decade and it is likely the standards will not be "implemented" for almost another decade. In fact, in the San Joaquin River safe drinking water standard of 50 ppb was violated just this last January at Hills Ferry. From August 2009 through January 20, 2010, levels of selenium at Hills Ferry consistently exceeded safe fish and wildlife protection averaging 15.65 ppb.³ Eliminating water quality standards is not the same as meeting them.

Taxpayer funds would be much better spent retiring these problem lands than by treating their ongoing drainage. While approximately \$100 million has been spent so far on the Grasslands Bypass Project as part of the West Side Regional Drainage Plan, about 60 percent of that amount was subsidized by the taxpayers. "Completion" of the Grasslands Bypass Project as proposed by the San Luis Delta Mendota Water Authority to the Bureau of Reclamation in a March 22, 2010, letter⁴ will cost taxpayers (without reimbursement) over \$50 million initially, and millions more annually for operation and maintenance costs in the form of CVP Project Use Power. In the absence of consuming this power to treat polluted

¹ http://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/sac_sj_basins_salinity_staffrpt.pdf, p 17 of 61, accessed 10/31/10.

² Open File Report No. 2008-1210. <http://pubs.usgs.gov/of/2008/1210/>; accessed 10/31/10.

³ San Francisco Estuary Institute, Grasslands Bypass Project Monthly Reports. <http://www.sfei.org/gbp/reports/monthly>, accessed 11/1/10.

⁴ http://www.c-win.org/webfm_send/121, accessed 10/31/10.

agricultural drain water, taxpayer subsidized electricity would instead be provided to municipalities such as the Sacramento Municipal Utilities District and the Northern California Power Agency to power productive economic activity in Central Valley cities, rather than prolong an environmentally damaging use of land.

Addressing toxic selenium drainage through land retirement makes far better technical and economic sense. The Bureau's own studies⁵ found land retirement of 300,000 acres of the most polluted lands in Westlands had a positive net benefit of over \$3.6 million/year. Whereas, retiring only 200,000 acres relying on untested and unproven treatment including the costs of hazardous waste disposal will exceed \$2.7 billion. These figures are conservative. Left out are the crop subsidies paid by the taxpayer to those irrigating these toxic lands. Based on the recent report by the Environmental Working Group⁶, if the \$10 million annual cost of crop subsidies is added, retiring the full 300,000 problem acres in Westlands would benefit taxpayers nearly \$14 million/year. Retiring the entire 379,000 problem acres in the San Luis Unit that includes the Grasslands area, as recommended by the U.S. Fish and Wildlife Service⁷ would save even more money.

The prospects for proving agricultural drainage treatment technology technically and financially feasible are highly uncertain at best. In fact, the US Bureau of Reclamation recently wrote to Senator Diane Feinstein that the proposed treatment of millions of acres of polluted water was technically infeasible and would require Congressional approval in excess of \$2.7 billion. Even Westlands Water District has suggested the treatment option is unlikely in a recent filing in Eastern Federal District Court.⁸

The State & Federal Contractors Water Agency letter claims that the toxic groundwater from Westlands does not drain to the Delta. State regulators and USGS scientists disagree with that statement. In fact, Senior Engineer Rudy Schnagl of the Central Valley Regional Water Quality Control Board testified at a May 27, 2010, hearing that contaminated groundwater from the northerly area of Westlands does enter the Grasslands Bypass Project and ultimately the San Joaquin River (see Exhibit A).

Furthermore, a 2004 Environmental Assessment for the Broadview Water Contract Assignment also identified that the northerly area of Westlands drains into the Grasslands area (Exhibit B). USGS reports that between 10-15% of the sub-surface toxic drainage flow is

⁵ U.S. Bureau of Reclamation, San Luis Drainage Feature Re-evaluation Final EIS, Appendix N, National Economic Impact Analysis Table N-10 page N-17 (21 of 36), Benefit/Cost Summary, Changes Relative to the No Action Alternative (\$/year in 2050).

http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=2240, accessed 10/31/10.

⁶ <http://ewg.org/Throwing-Good-Money-at-Bad-Land>, accessed 10/31/10.

⁷ Draft U.S. Fish and Wildlife Service Coordination Act Report for San Luis Drainage Feature Re-Evaluation. February 7, 2005 http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=2262, accessed 11/1/10.

⁸ Westlands Water District's Response To Federal Defendants' Status Report Of October 1, 2010; Request For Hearing, 10/19/10. http://www.c-win.org/webfm_send/122, accessed 11/1/10.

attributable to Westlands.⁹ The irrigation of upslope lands in Westlands creates a domino-like hydraulic pressure on downslope lands that drain into the San Joaquin River and ultimately drains to the Bay-Delta, contributing to the selenium problems there.

Given the enormous costs, financial infeasibility, and the utter lack of a reasonable technological solution other than land retirement, the Stewardship Council should take a close look at land retirement in the Environmental Impact Report as a means of reducing reliance on Delta exports to comply with the Delta Reform Act and to clean up selenium, salt, boron and nutrient pollution in the San Joaquin River and the Delta. A lot of stressors to San Joaquin River and Delta aquatic ecosystems could be reduced or removed by such actions, resulting in substantial savings to taxpayers as well as improvements to California's environment.

The Pacific Institute has identified 1.3 million acres of toxic lands within both the Central Valley Project and State Water Project service areas that would be eligible for retirement and would free up to 3.9 million acre-feet of water.¹⁰ At a cost of \$3,500/acre to include the water with the land, \$4.55 billion would free up 3.9 million acre-feet of water under contract and significantly reduce pollution of the San Joaquin River, the Delta and the valley's aquifers. While the cost is greater than the \$2.7 billion for implementation of the San Luis Drainage ROD, it includes acquisition of contract water associated with the retired lands that the San Luis Drainage ROD does not include. It also includes retiring a significant amount of land within the State Water Project service area that was not considered in the San Luis Drainage ROD. That is by far a much better deal than spending an equivalent amount of money on new reservoirs that would provide a fraction of the amount of water and provide few, if any water quality benefits. New Delta conveyance facilities are estimated to be \$8 to \$11 billion,¹¹ and the combined cost of building Sites and Temperance Flat reservoirs is estimated to be \$6.4 billion, producing less than half a million acre-feet of water annually.¹²

As shown in Exhibits C¹³ and D,¹⁴ some of the areas within Westlands have selenium contamination of groundwater exceeding the hazardous waste standard of 1,000 parts per

⁹ "Alternative to agricultural drains in California's San Joaquin Valley: Results of a regional-scale hydrogeologic approach." Kenneth Belitz, Department of Earth Sciences, Dartmouth College, Hanover, New Hampshire and Steven P. Phillips, Water Resources Division, U.S. Geological Survey, Sacramento, California. WATER RESOURCES RESEARCH, VOL. 31, NO. 8, PAGES 1845-1862, AUGUST 1995.

¹⁰ http://www.pacinst.org/reports/more_with_less_delta/more_with_less.pdf, page 7 (9 of 69), accessed 10/31/10.

¹¹ <http://www.scribd.com/doc/23643905/ato-bdcp-steering-committee-presentation-12-3-09-rev-i-mlc>, accessed 11/1/10.

¹² Pacific Institute, California's Next Million Acre-Feet, pages 7 and 8. http://www.pacinst.org/reports/next_million_acre_feet/next_million_acre_feet.pdf, accessed 11/1/10.

¹³ Figure 6-2 from San Luis Drainage Feature Re-evaluation Final EIS. U.S. Bureau of Reclamation, 2007. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=2230, page 5 of 238, accessed 10/31/10.

billion (ppb).¹⁵ Recently selenium toxicity similar that found at Kesterson has also been found at the Grasslands Bypass Project's reuse area.¹⁶ Any selenium induced mortality such as the deformed stilt embryo found there is a violation of the Migratory Bird Treaty Act. Kesterson-like effects are being seen in the food chain from Mud Slough to the San Francisco Bay.

In conclusion, we urge the Stewardship Council to include a full evaluation in the Delta Plan EIR of retirement of all toxic agricultural lands within the San Joaquin, Kern and Tulare basins to compare the benefits and costs to other alternatives such as building new reservoirs and paying for unproven technology for treatment of pollution. Reliance on nonexistent technology and public subsidies to continue farming toxic lands for the enrichment of a few harms farming, fishing and could devastate the Delta estuary livelihood, and is a violation of state and federal laws. We urge you to take a fresh and thorough look at the wisdom of irrigating these toxic soils and sending this pollution to the San Joaquin River and its inflow to the Delta and Bay.

Sincerely,



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Attachments:

Exhibit A- transcript of 5/27/10 CVRWQCB hearing on selenium Basin Plan Amendment
Exhibit B- Table 4-1, page 4-2 from U.S. Bureau of Reclamation, Broadview Water Contract Assignment Project Draft Environmental Assessment, 2004.

Exhibit C- Figure 6-2 from San Luis Drainage Feature Re-evaluation Final EIS. U.S. Bureau of Reclamation, 2007. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=2230, page 5 of 238, accessed 10/31/10.

¹⁴ http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/joepond.pdf, accessed 10/31/10. The shallow groundwater at a site near Five Points was measured by the Central Valley Regional Water Quality Control Board in 2003 to be 1480 ppb Selenium.

¹⁵ California Health and Safety Code Section 25122.7(b)(2).

¹⁶ "San Joaquin River Water Quality Improvement Project, Phase 1 Wildlife Monitoring Report, 2008." H.T. Harvey and Associates. July 2009. Page 22 (29 of 80) http://www.sfei.org/sites/default/files/sjrip_2008.pdf, accessed 10/31/10. The geometric mean, egg-selenium concentration in recurvirostrid eggs collected at the SJRIP Phase I area in 2008 (50.9 µg/g) exceeded all geometric mean selenium concentrations in recurvirostrid eggs collected at Kesterson Reservoir from 1983 to 1985.

Exhibit D- Slide from 2003 UC Davis Salinity/Drainage Annual Conference.
http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/joepond.pdf, accessed 10/31/10. The shallow groundwater at a site near Five Points was measured by the Central Valley Regional Water Quality Control Board in 2003 to contain 1480 ppb Selenium.

1 MS. CREEDON: Ms. Hart, if I could ask Rudy
2 to address a couple of issues?

3 MS. HART: Rudy?

4 MS. CREEDON: There was a lot of discussion
5 about upslope and offsite discharges onto the grasslands
6 project or contributing -- can you elaborate for the
7 board so that they understand what other programs may be
8 in place or will be in place to take care of those
9 issues that are not related to this project, so they
10 know we're just not ignoring it?

11 MR. SCHNAGL: Of course. There were
12 mentions of two types of inflows to the grasslands area
13 that are related to this project. First, the
14 groundwater from the Westlands Water District is moving
15 from that area to the northeast, as I mentioned earlier,
16 and that would flow under the project area. And so that
17 is of concern and -- to the commenters and from our
18 standpoint, any of that water that's captured by the
19 Grassland Bypass Project farmers has to be managed by
20 them and be discharged within their load limits.

21 So they're responsible if they collect it in
22 their subsurface drainage systems and discharge it. So
23 that puts the responsibility on this project for any
24 groundwater that enters their area.

25 There's also surface water impacts in some

1 of the grassland waterfowl areas, the wetland areas.
2 From tile drainage to the east and west of the bypass
3 project area, and I'm thinking that a map might help
4 here.

5 MS. CREEDON: While he's setting that up, I
6 wanted to bring up to the board, we also did have a
7 request for report of discharge from the grasslands
8 water district. It's been difficult to get that
9 document because it's been difficult for them to define
10 their project in order for us to do the CVCWA
11 requirements. And so we've been working with them on a
12 parallel basis.

13 We have a long-term irrigated land program,
14 which is now moving into regulating groundwater. So
15 regardless of if we have an individual report of
16 discharge or not, grasslands -- or the Westlands Water
17 District area would be regulate -- is regulated and will
18 continue to be regulated under the irrigated lands
19 program, which we will then address both surface water
20 and groundwater and that will be captured under that
21 program. So it's not being ignored by the board, and
22 the selenium issues offsite are not being ignored by the
23 board as well.

24 MR. SCHNAGL: Now that I have a map to help
25 explain things, the red area is the Grassland Bypass

1 Project service area. The Westlands Water District is
2 to the south. It's not marked, but it's to the south of
3 that red area. Groundwater is moving to the northeast,
4 and so some of the water that's collected by the
5 Grassland Area Farmers may originate in the Westlands
6 Water District, but they're entirely responsible for
7 anything they collect and discharge through the bypass
8 project.

9 The other dischargers that have been
10 referred to in some of the comments from agricultural
11 subsurface drainage systems within this grassland
12 watershed, and it's mostly along the west side, where my
13 arrow is or along the east side. And that drains toward
14 the center of the watershed where the wetland areas are,
15 and Fish and Wildlife Service has repeatedly pointed out
16 their concerns about those drains and their impacts on
17 the wetlands.

18 Those areas, both farmers and the wetlands,
19 are participating in the irrigated lands regulatory
20 program, and we will be working with that group, in the
21 irrigation districts in the area, to address the fish
22 and wildlife concerns.

23 MS. CREEDON: So, Rudy, since you have this
24 up, let me ask you a couple more question to address the
25 board. There are a couple issues especially with the

4.2 WATER RESOURCES

4.2.1 PROPOSED ACTION ALTERNATIVE

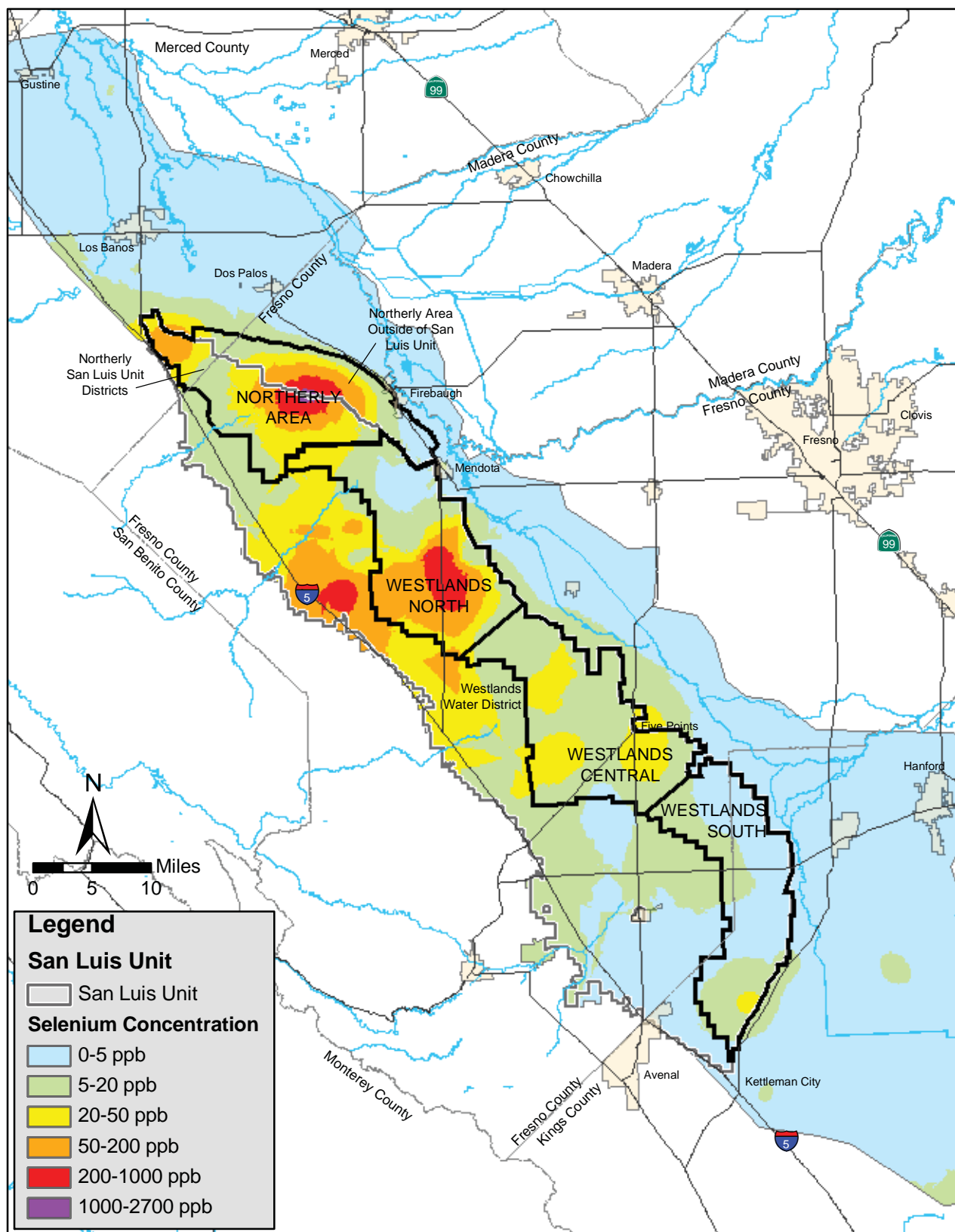
The Proposed Action would not result in any significant impacts to water quality on any surface water body including local streams, rivers, lakes, or bays. In fact, the Proposed Action would reduce the quantity of drainage water currently being discharged from the BWD to the San Joaquin River by approximately 2,600 acre-feet or 70 percent of water per year (Summers Engineering, 2003). More specifically, by fallowing the BWD lands and not applying CVP water for irrigation, the estimated reduction in drain water discharge from existing conditions (approximately 3,700 afy), will be reduced by approximately 1,100 afy. **Most of these resulting flows are likely attributable to sub-surface flows originating from up-gradient locations to the south and west.** More importantly, within this reduction of approximately 2,600 afy, it is estimated that there will be substantial reductions in the quantities of salts, selenium, and boron discharged to the San Joaquin River. Using the existing conditions of approximately 6.57 tons of salt, 0.58 pounds of selenium, and 20 pounds of boron per acre-foot of discharged water from BWD to the San Joaquin River, the Proposed Action would result in the elimination of approximately 17,000 tons of salt, 1,500 pounds of selenium, and 52,000 pounds of boron to the San Joaquin River each year. As the San Joaquin River is listed as an impaired water body and is on the 303(d) list for boron, selenium and electrical conductivity, these reductions provide a desirable benefit to the San Joaquin River. These benefits are summarized in Table 4-1 below.

**TABLE 4-1
DRAINAGE AND WATER QUALITY EFFECTS OF PROPOSED ACTION ON THE
SAN JOAQUIN RIVER**

	Existing Conditions	Under Proposed Action Conditions	Estimated Reduction Attributable to Proposed Action
BWD Drainage to San Joaquin River (afy)	3,700	1,100	2,600
BWD Estimated Salt Production (tons/yr)	24,300	7,300	17,000
BWD Estimated Selenium Production (lbs/yr)	2,140	640	1,500
BWD Estimated Boron Production (lbs/yr)	74,000	22,000	52,000

Source: Summers Engineering, 2003

The Proposed Action would not entail any new development and therefore, no net increase in impervious surfaces is anticipated to occur. The Proposed Action would also involve a net reduction in irrigation water (approximately 16,200 afy) applied to the site. The Proposed Action would not involve the construction of any new facilities that would be prone to flooding, placed within a 100-year flood zone, or impede or redirect flood flows. Consequently, implementation of the Proposed Action would have no significant impacts on existing hydrologic hazards,



San Luis Drainage Feature Re-evaluation	Selenium Concentration In Shallow Groundwater	Figure 6-2
17324004		

Exhibit D

CVRWQCB Measured 1480 ppb Selenium in 2003 in Ponded Shallow Groundwater



Drainage Solutions: Homage to the Ponds of Folly, Joseph Skorupa, U.S. Fish and Wildlife Service. 2003 U.C. Salinity/Drainage Annual Conference March 26, 2003.

In the spring of 2002 USFWS sampled eggs from shorebirds nesting near a small depression of standing water next to a cotton gin site at the corner of S. Colusa Ave and W. Mt Whitney Ave. (The nearest town is Five Points). The water could be traced back to a pipe that appeared to be discharging shallow groundwater.

The eggs contained very high levels of Se and numerous deformed embryos were documented from those eggs.

The Central Valley Regional Water Board took a water sample from the same site in the Spring of 2003 and a Se concentration of **1,480 ppb** was measured (that of course exceeds the state's hazardous waste threshold of 1,000 ppb for Se, and far exceeds the 2 ppb standard that the U.S. Fish and Wildlife Service considers protective for breeding water birds).